

The Rise of Broadcasting



History of Information 103
Geoff Nunberg

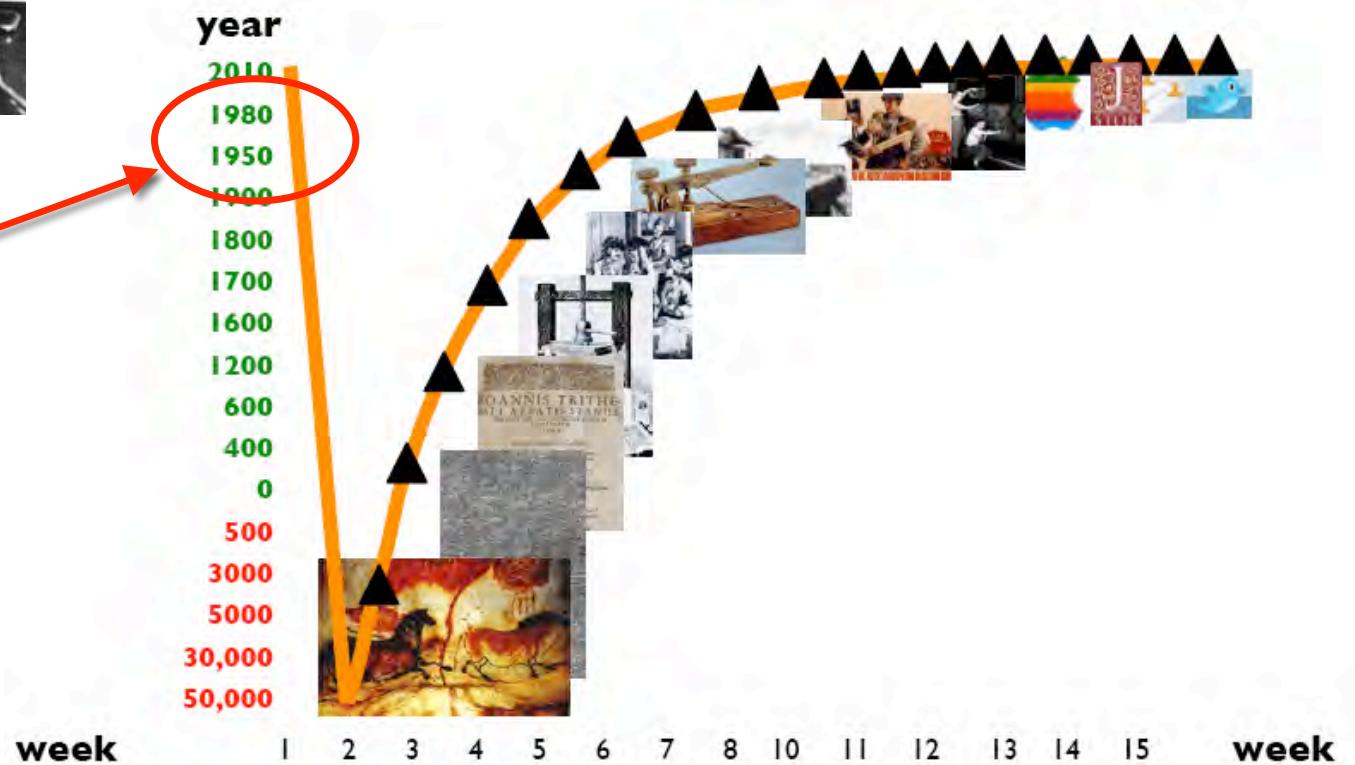


March 31, 2010

Where We Are



The broadcast age





Itinerary, 3/31

Radio: technology, application, medium

Technological Development of Radio

Who Controls Radio

Radio comes of age

Radio in public life

The Arrival of Television

Television as an Information Medium



Establishing Remote Presence

Representing presence symbolically or iconically

Writing, print, telegraphy, postal service etc.; also painting, engraving, etc.

Extending presence:

Photography, telephony, cinema, radio, television



The range of radio



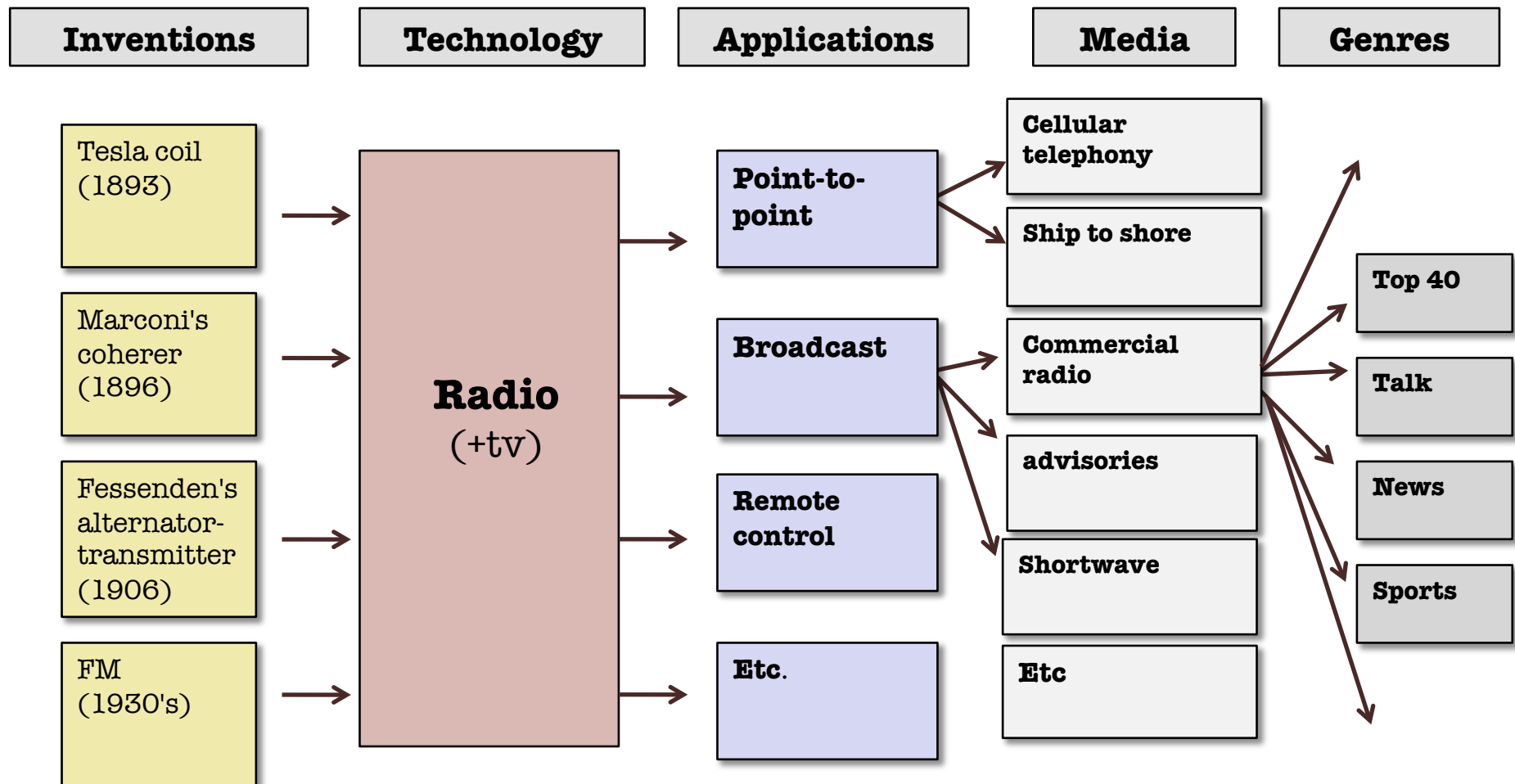


The range of radio



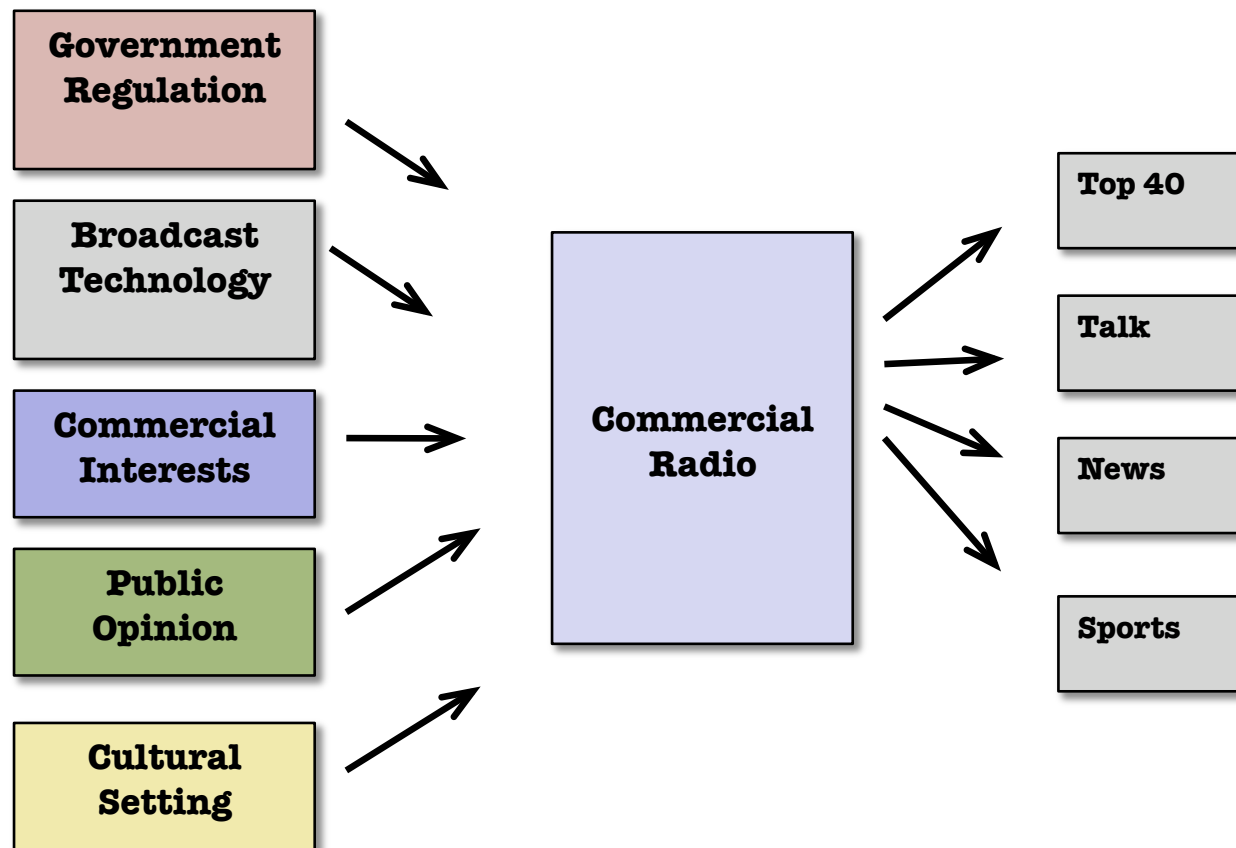


Inventions, Technologies, Applications, Media





Multiple Influences

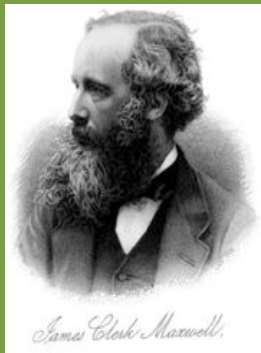




Technological Development of Radio



Technological Development of Radio



1861-1865: James Maxwell describes propagation of electromagnetic waves

1886: Heinrich Hertz demonstrates transmission & reception of radio waves at 20 m. distance

"It's of no use whatsoever[...] this is just an experiment that proves Maestro Maxwell was right - we just have these mysterious electromagnetic waves that we cannot see with the naked eye. But they are there."



Heinrich
Hertz

1895: Nikola Tesla transmits radio waves from NY to West Point (50 mi.)

1895: Guglielmo Marconi transmits radio signals over a mile using coherer, basis of early radiotelegraphy

Technological Development of Radio



Tesla



Marconi



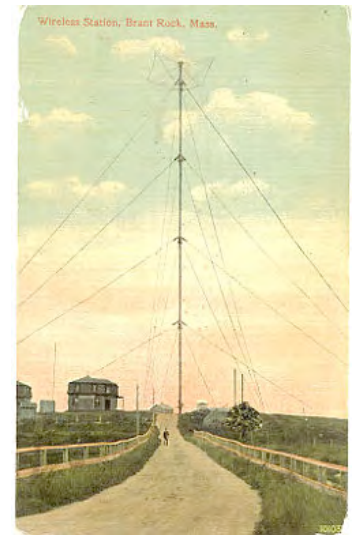
Reginald Fessenden

1896: Marconi receives British patent for transmission & reception of "Herzian waves" (US patent 1896)

1900: Marconi patents tuning dial

1901: Marconi claims to have transmitted radio signals from Poldhu (Cornwall) to Newfoundland

1906, Christmas eve: Reginald Fessenden makes first audio broadcast from Brant Rock, MA. Handel aria "Ombra mai fu" heard as far away as Norfolk, VA.



Brant Rock transmitter



Early Point-to-Point Applications of Radio



1905: Japanese use of radio helps in victory over Russian fleet at battle of Tsushima

1912: Titanic uses radio to signal for help, but one nearby ship misses signal; Congress passes Radio Act to allocate band frequencies, require licensed radio operators on ships.

1914-1918 British domination of wireless & cable technology gives it strategic advantages in WWI





Who Controls Radio?



Models of Control of Broadcasting

After WWI, debates over how to regulate radio, apportion spectrum. RCA, Westinghouse, AT&T jostle with Dep't. of the Navy for control.

Several models:

- State-owned, politically controlled (many European nations)

- State establishes quasi-independent public corporation supported by tax on receivers (e.g. UK)

- State licenses frequencies to commercial broadcasters, exerts some control over content; revenues derived from advertising (US)



Models of Broadcasting as Medium

How to think about broadcasting?

Broadcasting as common carrier (i.e., like phone service) with obligation to provide general access

Broadcasting as extension of press, exempt from control

Broadcasting as entertainment (like movies) subject to censorship



How to Pay for Radio?



Herbert Hoover

"[It would be] inconceivable that we should allow so great a possibility for service to be drowned in advertiser chatter"

Sec. of Commerce Herbert Hoover, 1924



Resolving the Control of Radio

1927: Radio Act establishes Federal Radio Commission

Authorizes FRC to grant broadcasting licenses & assign frequencies. Limits power of FRC to control programming, apart from banning "obscene or indecent" language

Requires stations to give equal time to political candidates.

Opens radio to wide use of advertising; advertisers assume increasing responsibility for creating content

FRC favors "clear channel" allocations (1 station per frequency), which gives most bandwidth to networks & commercial stations, on grounds of "public convenience"



Resolving the Control of Radio

1934: Communications Act replaces FRC with Fed. Communications Commission.

Rejects efforts to establish "hybrid" systems like those in Canada & Australia, which made provision for state-controlled public interest broadcasting alongside of commercial radio



Radio Comes of Age



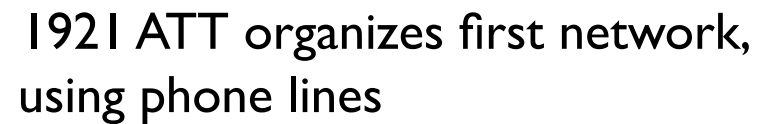
The Emergence of Broadcast



1920: Marconi Company sponsors first regular "public" broadcasts in UK, but Post Office bans further use until 1922

Nov. 2, 1920: KDKA Pittsburgh broadcasts results of presidential election; first station to schedule regular broadcasts.

1921: KDKA makes first broadcast of Major League baseball games



1921: Telephone circuits carry Harding's Armistice Day Address from Arlington Cemetery to NY and San Francisco

GE, RCA, & Westinghouse respond,
using telegraph lines; networks merged
in 1926 as Nat. Broadcasting Company





"Radio Mania"



1922: BBC begins broadcasting from the roof of Selfridges in London

1920-1925: "Broadcasting boom" leads to rapid increase in number of stations & receivers.

Household penetration is 24% in 1927; 46% in 1930; 65% in 1934

1934: First FM licenses granted, but technology doesn't catch on for 25 years



[illegible]



The Development of Programming



1925-1940 Emergence of radio-specific genres, with process dominated by advertisers: variety, music, drama, serials, quiz shows, etc.

1925: Grand Ole Opry first broadcast on WSM, Nashville

1928: "Amos n' Andy" originates at WMAQ Chicago

1930: WGN Chicago broadcasts "Painted Dreams," first radio soap opera about Irish widow & daughter



Freeman Gosden and
Charles Correl



The Goldbergs



Jack Benny



Commercial Radio



The Champion Sparkers, 1928



The Ipana Troubadors

"American radio is the product of American business! It is just as much that kind of product as the vacuum cleaner, the washing machine, the automobile, and the airplane. . . . If the legend still persists that a radio station is some kind of art center, a technical museum, or a little piece of Hollywood transplanted strangely to your home town, then the first official act of the second quarter century should be to list it along with the local dairies, laundries, banks, restaurants, and filling stations."

J. Harold Ryan, president of Nat. Assoc. of Broadcasters, 1945, on the first quarter-century of radio

Commercial Radio



1944- Chiquita Banana, first "hit" radio jingle, sells 1 million records

Triumph of the jingle



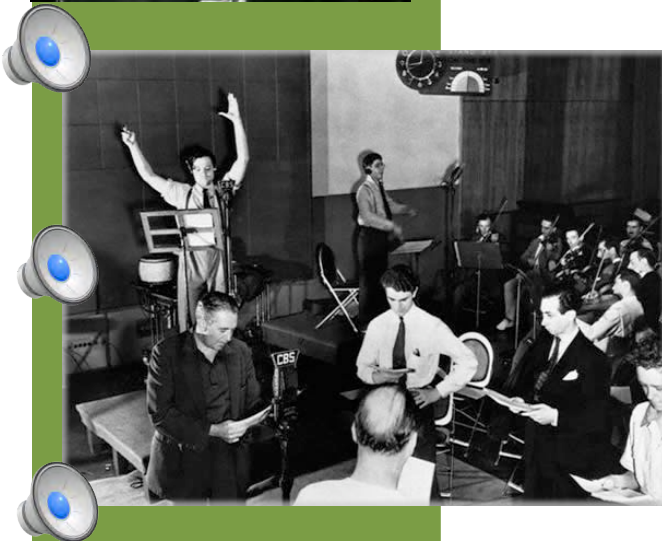
The Wheaties Quartet --1926



The Development of Programming



Oct. 30, 1938: Orson Welles Mercury Theater radio play of "War of the Worlds" creates some panic among listeners



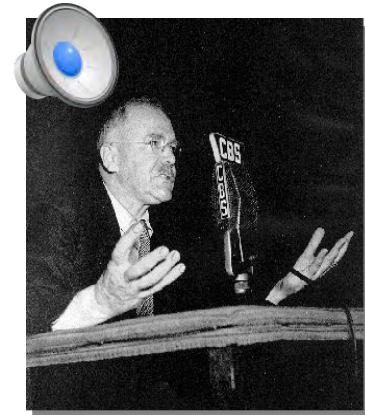


Radio in Public Life



The Advent of the Commentator

1927: H.V. Kaltenborn, broadcasting news, first heard on CBS



1932: Walter Winchell begins NBC (later ABC) broadcast on "Jergens Journal"





Preachers, Politics & Propaganda



Father Charles Coughlin, the "radio priest"



Billy Sunday



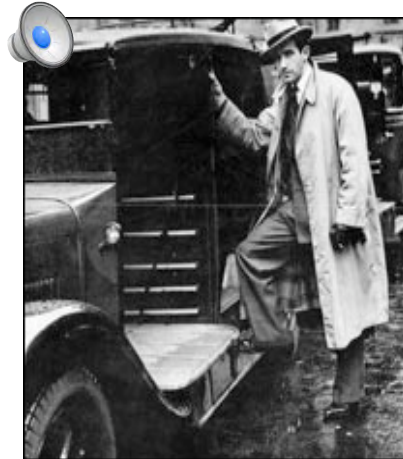
FDR after "fireside chat"

1941: 90% of Americans listen to radio 4 hrs/day



Radio Goes to War

- 1940: Edward R. Murrow's broadcasts from the London Blitz increase support for US intervention on Allied side





The Arrival of Television



The Invention of Television



"The First Invention to be achieved by committee" --Albert Abramson

1926 John Logie Baird demonstrates electromechanical television transmission

1934 Philo Farnsworth demonstrates all-electronic television transmission

1936 Experimental TV broadcasting in US, UK, France, Germany

1939: NBC inaugurates US broadcasting at NY World's Fair

1946 Regular network TV broadcasting begins in US





The Advent of Television



In postwar period, television rapidly gains national audiences in US and Europe

1946: "Hourglass," first hour-long variety show, airs on 3 NBC stations; "Faraway Hills" becomes the first TV soap opera

June 19, 1946 Joe Louis-Billy Conn fight viewed by 1m people over 140k sets (many in bars)

1947: First telecast of World Series game (Yankees v Dodgers); Harry Truman addresses US over TV from White House; Debut of "Kraft Television Theater"

1948: 350k TV sets in use, half in NYC area; "Howdy Doody" debuts



The Advent of Television



1949: 2m sets in US

1950: 5.3m sets in US,

1951: 13m sets in US; "I Love Lucy" premieres; Jan 1:

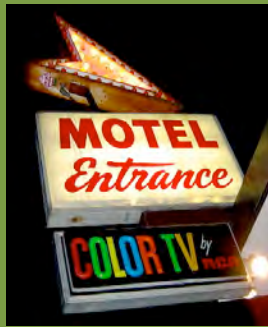
1953: TVs in 50% of American homes; Debut of "Today Show"

1954: Debut of "Gunsmoke," "\$64,000 Question," "Captain Kangaroo"; "The Tonight Show" (w. Steve Allen; switches to talk format w/ Jack Paar in 1957)

1956: Debut of "Playhouse 90"



Further Developments: Color



1929: Color television demonstrated in 1928 by Bell Labs

1965: NBC announces that all new programming would be in color (except for "I Dream of Jeannie.")

1968: Sony introduces single-gun Trinitron color

1972: Sales of color sets exceed B&W



Further Developments

1948: "Community Antenna" television (CATV) systems introduced in rural areas of Oregon & Pennsylvania.

1972: Sterling Cable (NY) launches Home Box Office (later first service to use satellite distribution)

1980: Cable reaches 15m households

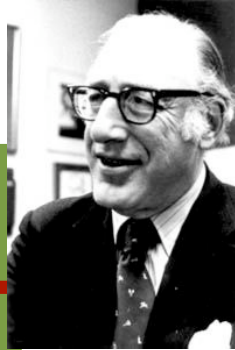
1952: Raytheon introduces first transistor radio at \$49.95

1956: Zenith introduces first remote control (connected to TV by cable). First wireless control (Zenith "Space Command") introduced shortly after.





Television as an Information Medium



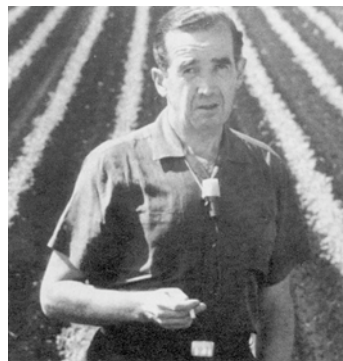
The TV Documentary

1950: "See It Now" debuts on CBS, w/
Edward R. Murrow, edited by Fred Friendly

1952: Murrow presents "Christmas in Korea" from
front lines

1956: Murrow's program on Sen. Joseph McCarthy

1960: Murrow and Friendly produce "Harvest of
Shame" for CBS Reports



This scene is not taking place in the Congo. It has nothing to do with Johannesburg or Cape Town...This is Florida. These are citizens of the United States, 1960. This is a shape-up for migrant workers.... This is the way the humans who harvest the food for the best-fed people in the world get hired. One farmer looked at this and said, "We used to own our slaves; now we just rent them."

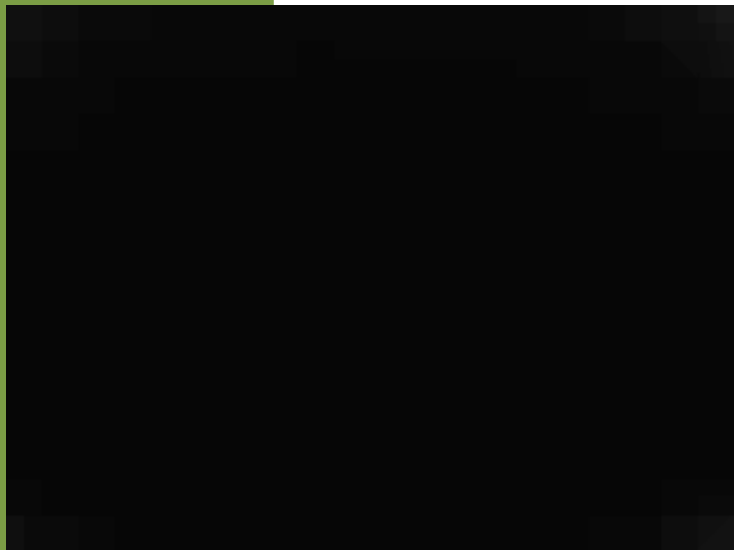


Television Replaces the Newsreels

1911: Charles Pathe introduces first weekly newsreel, for RKO theaters

1927: Fox Movietone presents first sound newsreel, of Charles Lindbergh's takeoff

1931: *Time* founder Henry Luce launches "March of Time" weekly movie magazine, ends in 1951



1924



1934



The rise of TV news



1963 CBS extends evening news to 30 min.

1965- Nightly news runs daily coverage of Vietnam war – Morley Safer films US troops burning houses in Cam Ne

1967 CBS launches "60 Minutes"

1969 Spiro Agnew launches attacks on "effete corps of impudent snobs" in media

1973 Telecast of Watergate Hearings

1980 Ted Turner launches CNN

1991 Desert Storm bombing of Baghdad relayed live by CNN





The "TV-ization" of Spectacle



Effects of televising on sporting events, political rituals, etc.

State of the Union address broadcast since Coolidge 1923, but until the 1970's retains form of address to Congress

Eisenhower, 1955: "It is expected that more than \$12 billion will be expended in 1955 for the development of land, water and other resources; control of floods, and navigation and harbor improvements; construction of roads, schools and municipal water supplies, and disposal of domestic and industrial wastes."



The "TV-ization" of Spectacle



The "Lenny Skutnik" moment, 1982

Just just two weeks ago, in the midst of a terrible tragedy on the Potomac, we saw again the spirit of American heroism at its finest the heroism of dedicated rescue workers saving crash victims from icy waters. And we saw the heroism of one of our young Government employees, Lenny Skutnik, who, when he saw a woman lose her grip on the helicopter line, dived into the water and dragged her to safety.

Ronald Reagan, SOU speech, 1982

Cf similar changes in party conventions, debates, campaign speeches, etc.

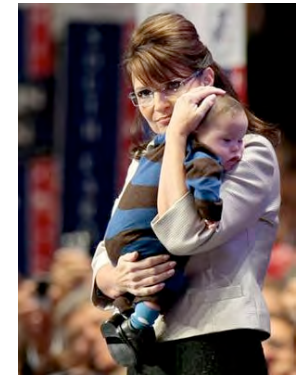




The Creation of New Political Spectacles



Kennedy-Nixon debate, 9/26/60:
The convention as TV show





The Transformation of Radio, 2



1945: On NYC's WMCA, DJ Barry Gray begins conversing with listeners live.

1960: KABC (LA) adopts first all-talk format

Barry Gray

1982: Howard Stern begins broadcasting at WNBC (NYC)

1987: FCC repeals "Fairness Doctrine," dating from 1949, which required radio stations to present issues in an "equal and balanced" manner. Cites large number of stations variety of media voices.

1988: Limbaugh moves to NYC. Current weekly cume = 13.5 m, followed by Sean Hannity (12.5), Michael Savage (8.25), Laura Ingraham (5.0), Bill O'Reilly (3.25), others. Highest-ranked liberal talker is Ed Schultz (2.25)





The New World of Political Broadcasting



1996: Fox News launched, pioneers political cable talk-show. Quickly establishes lead in average hourly viewership, though remaining behind CNN in cumulative audience.

2004: Air America radio begins syndicated broadcasting to provide "liberal voice" in radio; 2006, files for bankruptcy protection

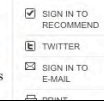


TELEVISION
Is Jon Stewart the Most Trusted Man in America?



Jon Stewart, on the set of "The Daily Show," tied Tom Brokaw, Brian Williams, Dan Rather and Anderson Cooper among admired journalists. And that was last year.
By MICHIO KAKUTANI
Published: August 15, 2008

IT'S been more than eight years since "The Daily Show With Jon Stewart" made its first foray into presidential politics with the presciently named Indecision 2000, and the difference in the show's approach to its coverage then and now provides a tongue-in-cheek





Role of broadcast media in modern political language





Pervasive Media

The flow of images and sounds through the households of the rich world, and the richer parts of the poor world, seems unremarkable today. Only a visitor from an earlier century or an impoverished country could be startled by the fact that life is now played out against a shimmering multitude of images and sounds, emanating from television, videotapes, videodiscs, video games, VCRs, computer screens, digital displays of all sorts, always in flux, chosen partly at will, partly by whim, supplemented by words, numbers, symbols, phrases, fragments, all passing through screens that in a single minute can display more pictures than a prosperous seventeenth-century Dutch household contained over several lifetimes...

Todd Gitlin



Vermeer, "The Concert"



"The Medium is the Message"



Television has become, so to speak, the background radiation of the social and intellectual universe, the all-but-imperceptible residue of the electronic big bang of a century past, so familiar and so thoroughly integrated with American culture that we no longer hear its faint hissing in the background or see the flickering grey light. This, in turn, means that its epistemology goes largely unnoticed. And the peek-a-boo world it has constructed around us no longer seems even strange... Our culture's adjustment to the epistemology of television is by now almost complete; we have so thoroughly accepted its definitions of truth, knowledge and reality that irrelevance seems to us to be filled with import, and incoherence seems eminently sane.

Neil Postman, *Amusing Ourselves to Death*, 1986



Readings and Assignment for 4/6

Campbell-Kelly, Martin & William Aspray. 1996. "Babbage's Dream Comes True," Course Reader

Sketch of the Analytical Engine Invented by Charles Babbage, trans. Ada Augusta, Countess of Lovelace. Online
[read the final paragraph before the "Notes by the translator. It begins "Now, admitting that such an engine ..." and ends "... such an undertaking."]

Assignment

In the reading from Campbell-Kelley and Aspray, Leslie John Comrie blames the British government for failing to fund Babbage's "dream." Given the views of what Babbage's machine might be useful for--sketched out in Campbell-Kelly and Aspray's chapter and in the paragraph from Menabrea--do you think Comrie's accusation is reasonable? What do these accounts about the development of the computer say about the changing nature of invention between the 18th and the 20th century?